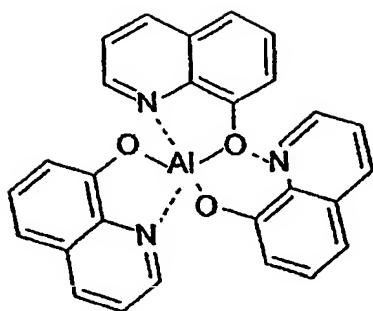
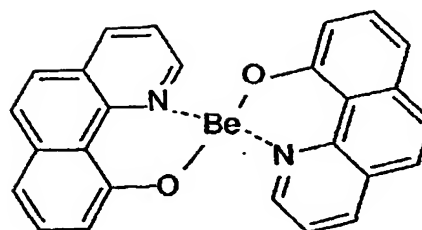


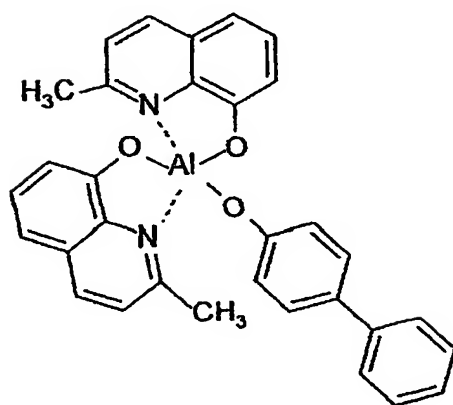
1/27



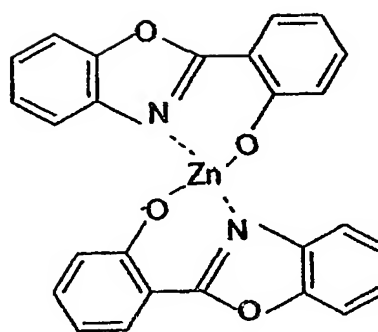
Alq



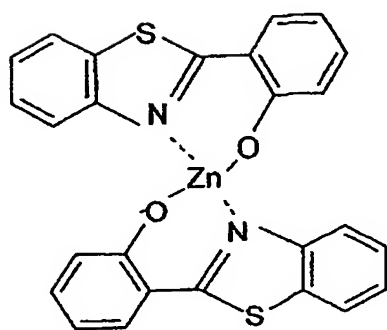
Bebq



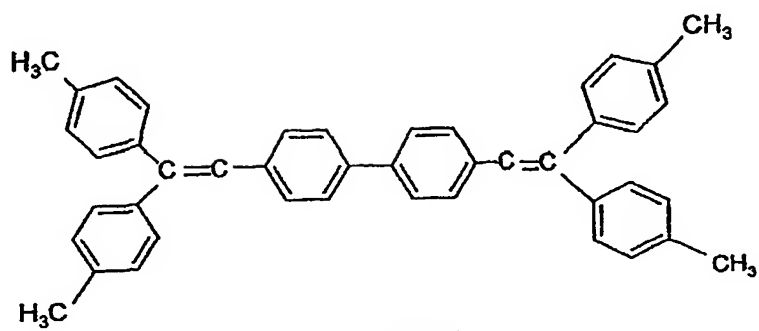
BAlq1



ZnPBO



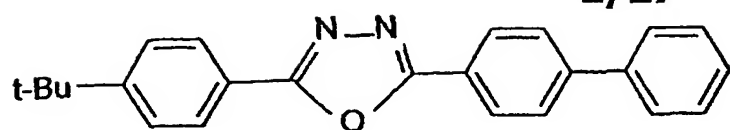
ZnPBT



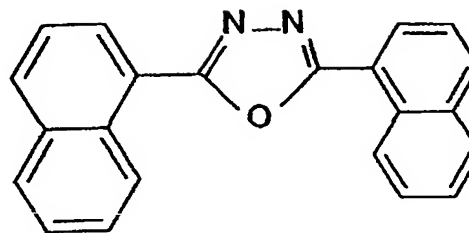
DTVb1

Fig 1

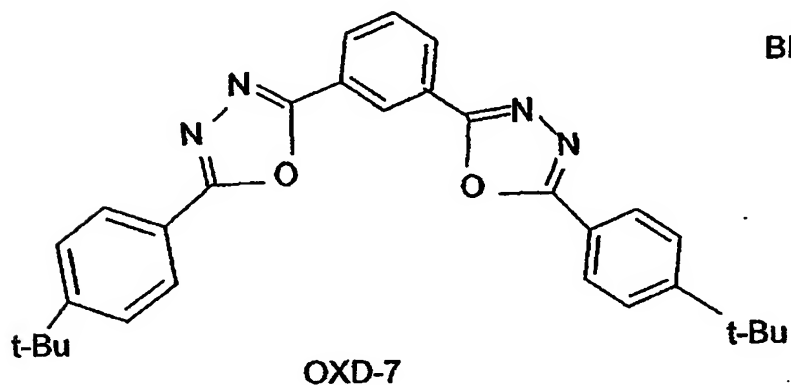
2/27



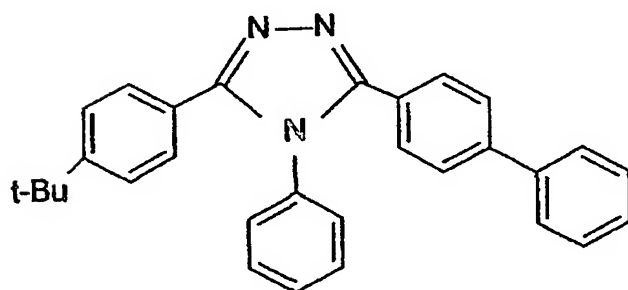
t-Bu-PBD



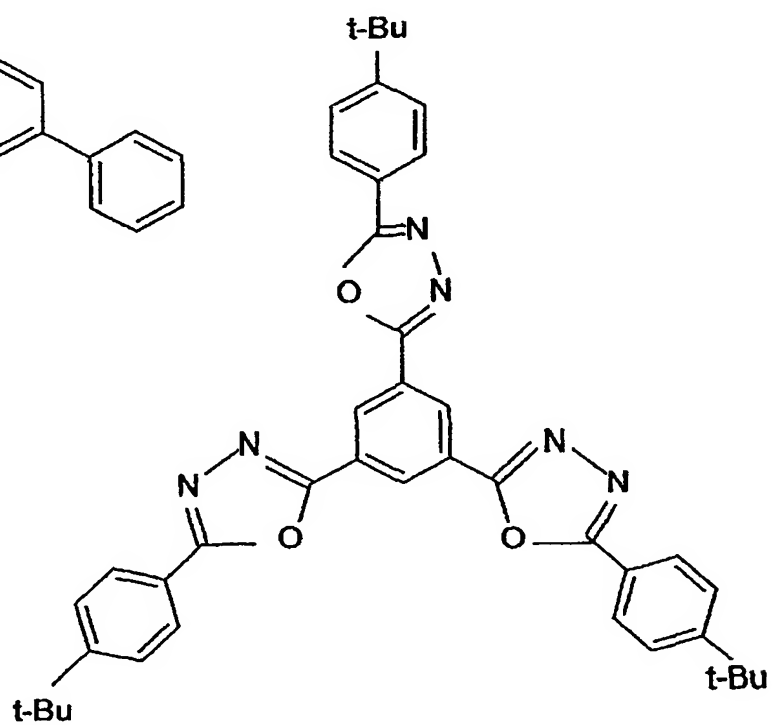
BND



OXD-7



TAZ



OXD-Star

Fig 2

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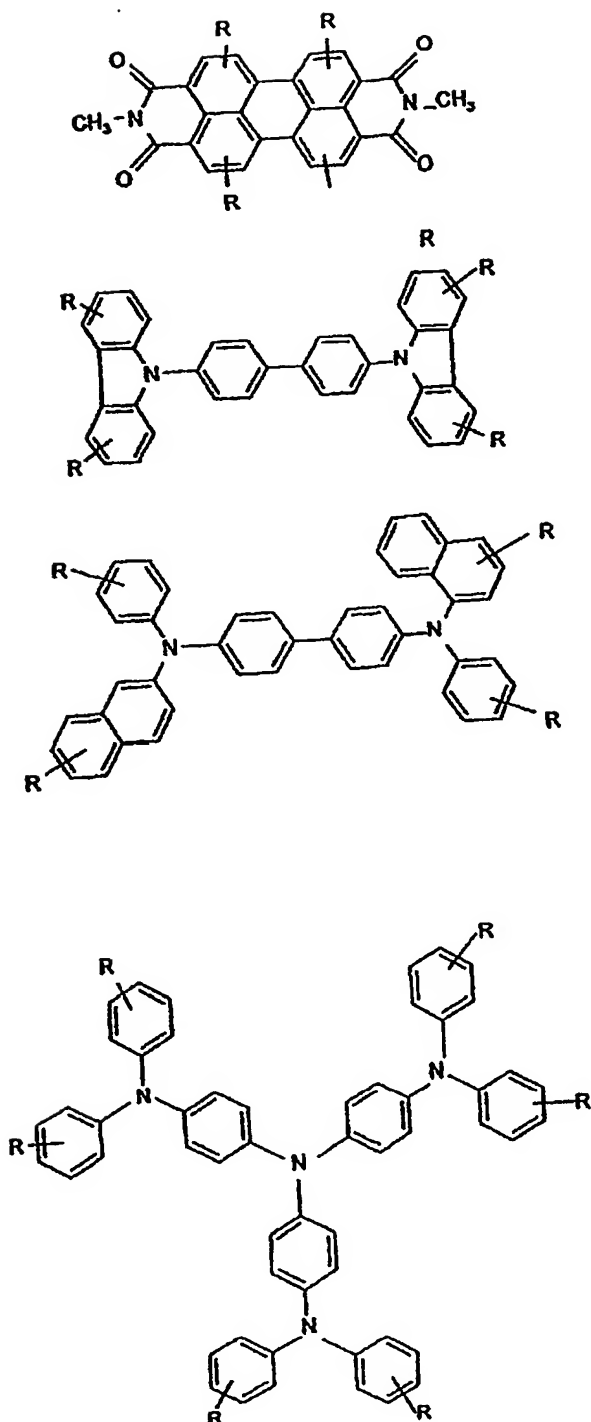


Fig 3

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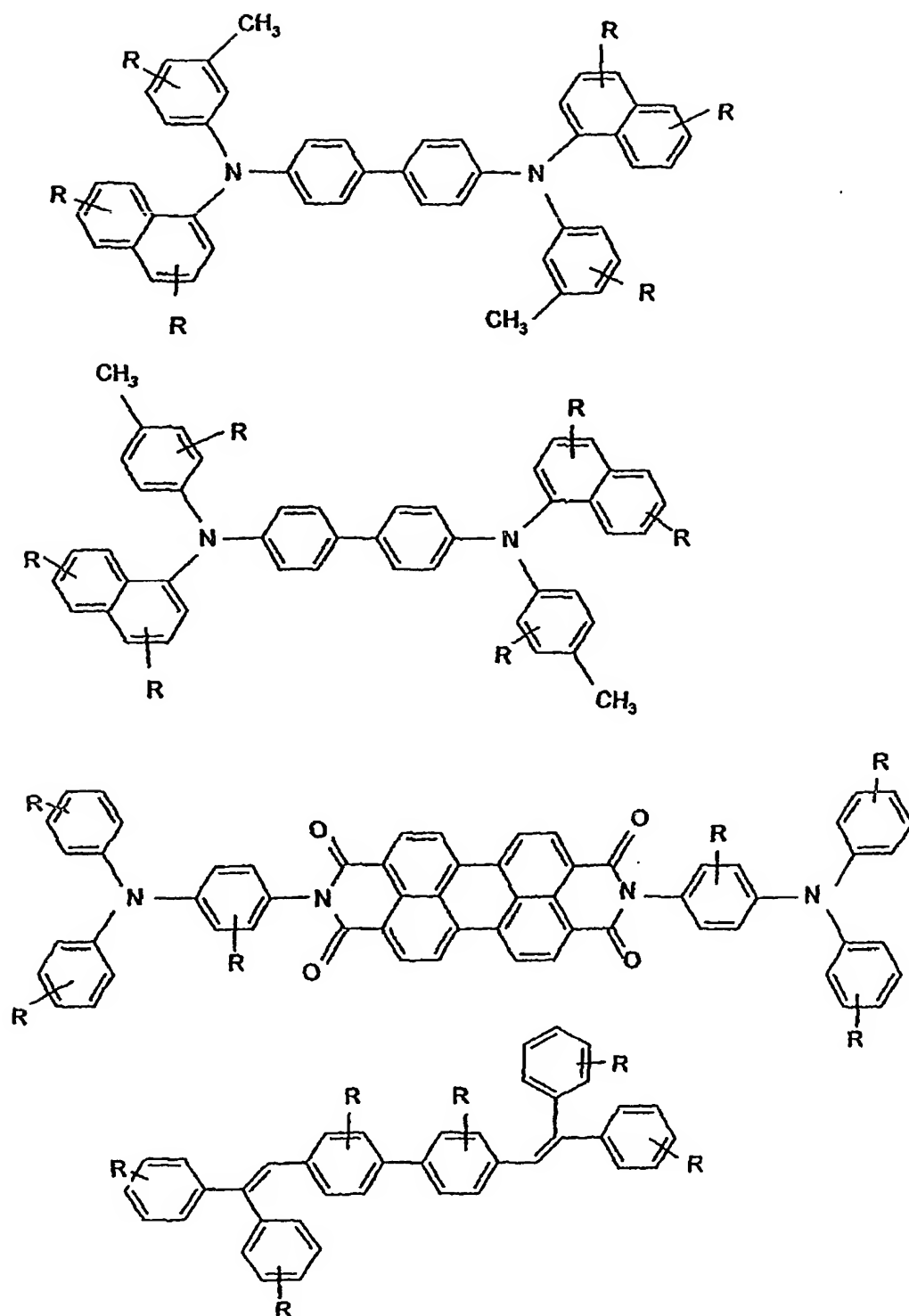


Fig 4

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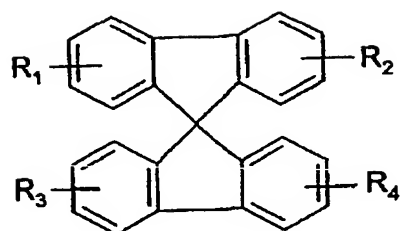


Fig. 14a

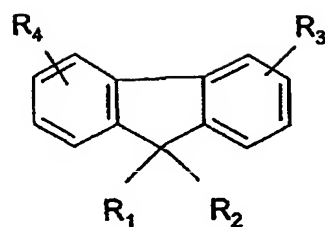
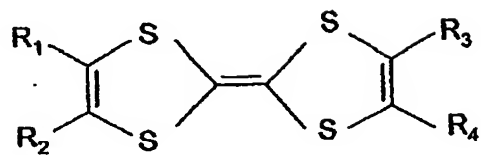


Fig. 14b



or

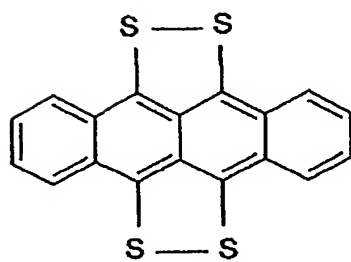
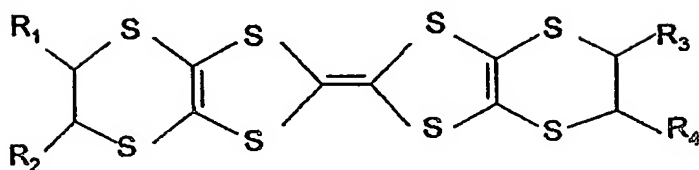


Fig 5

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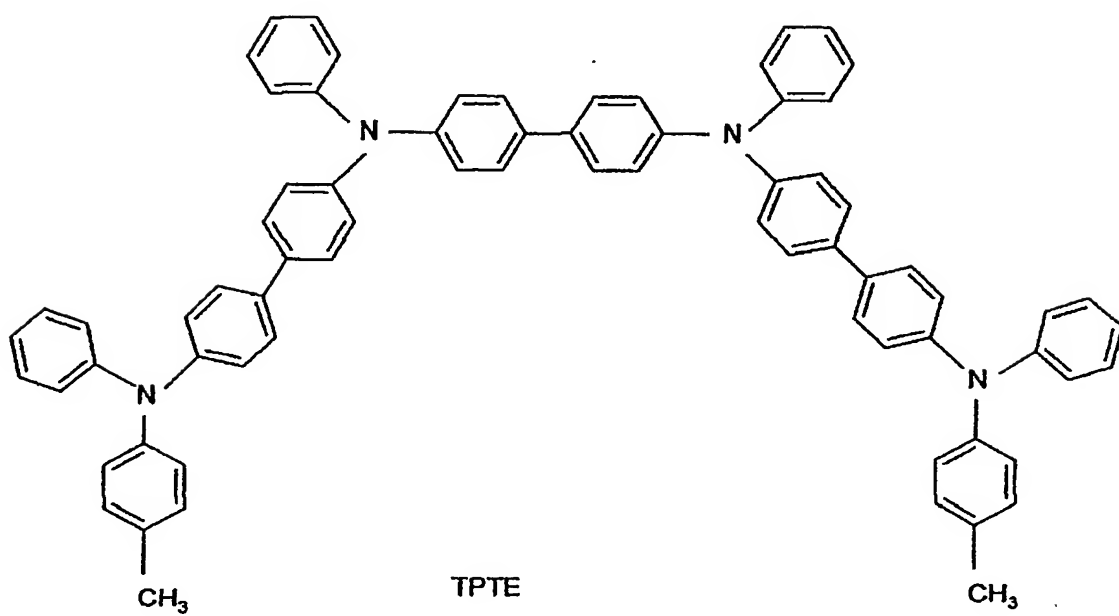
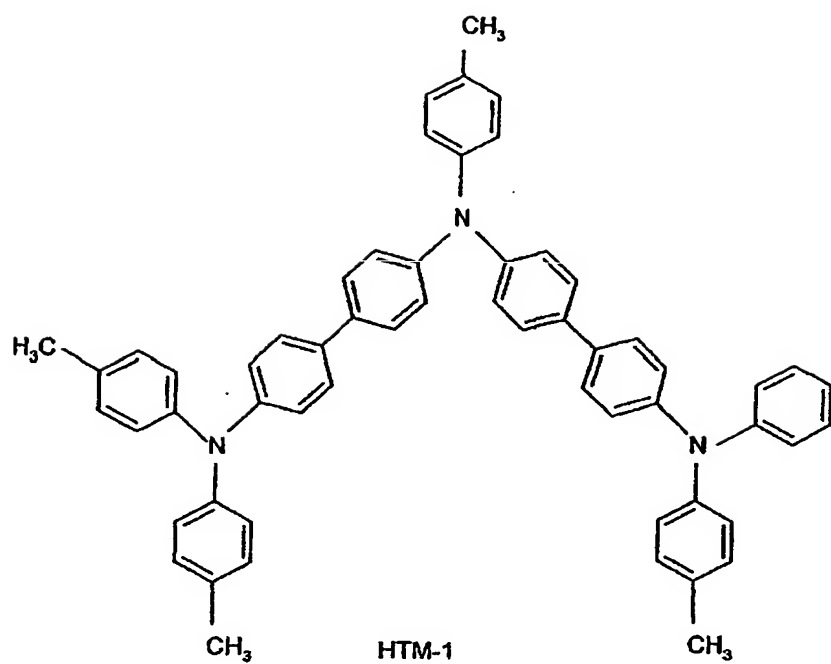
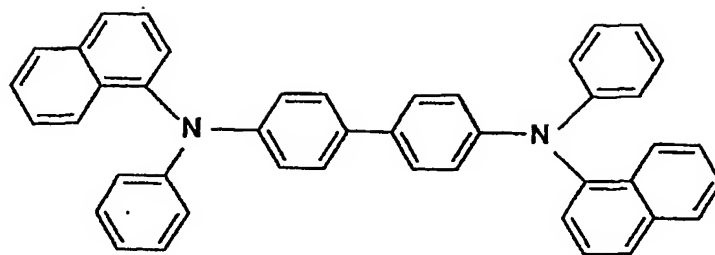
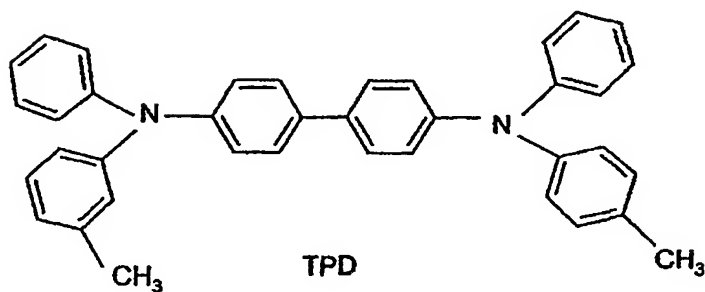
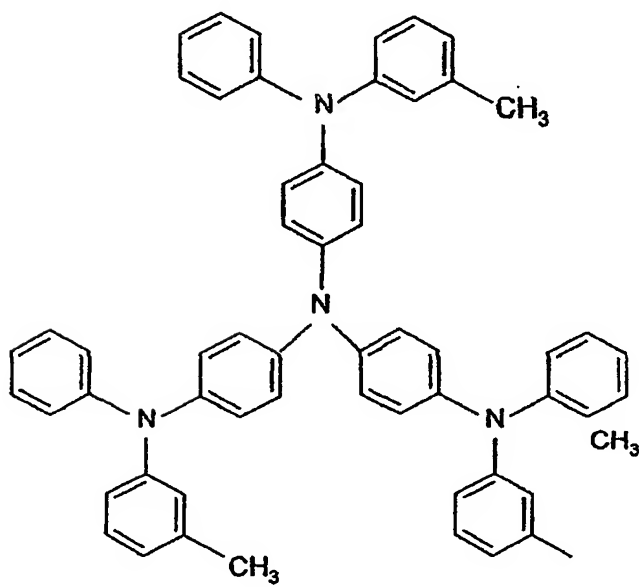


Fig 6

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 $\alpha$ -NPB

TPD



mTADATA

Fig 7

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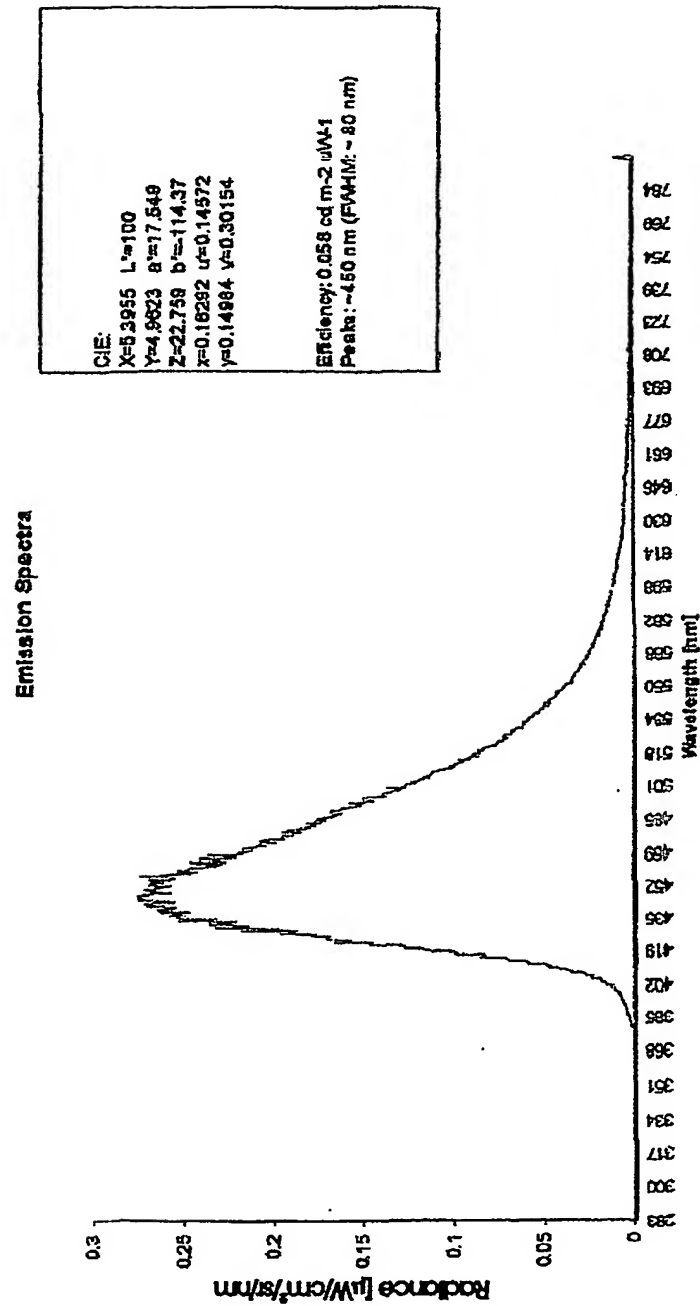


Fig 8



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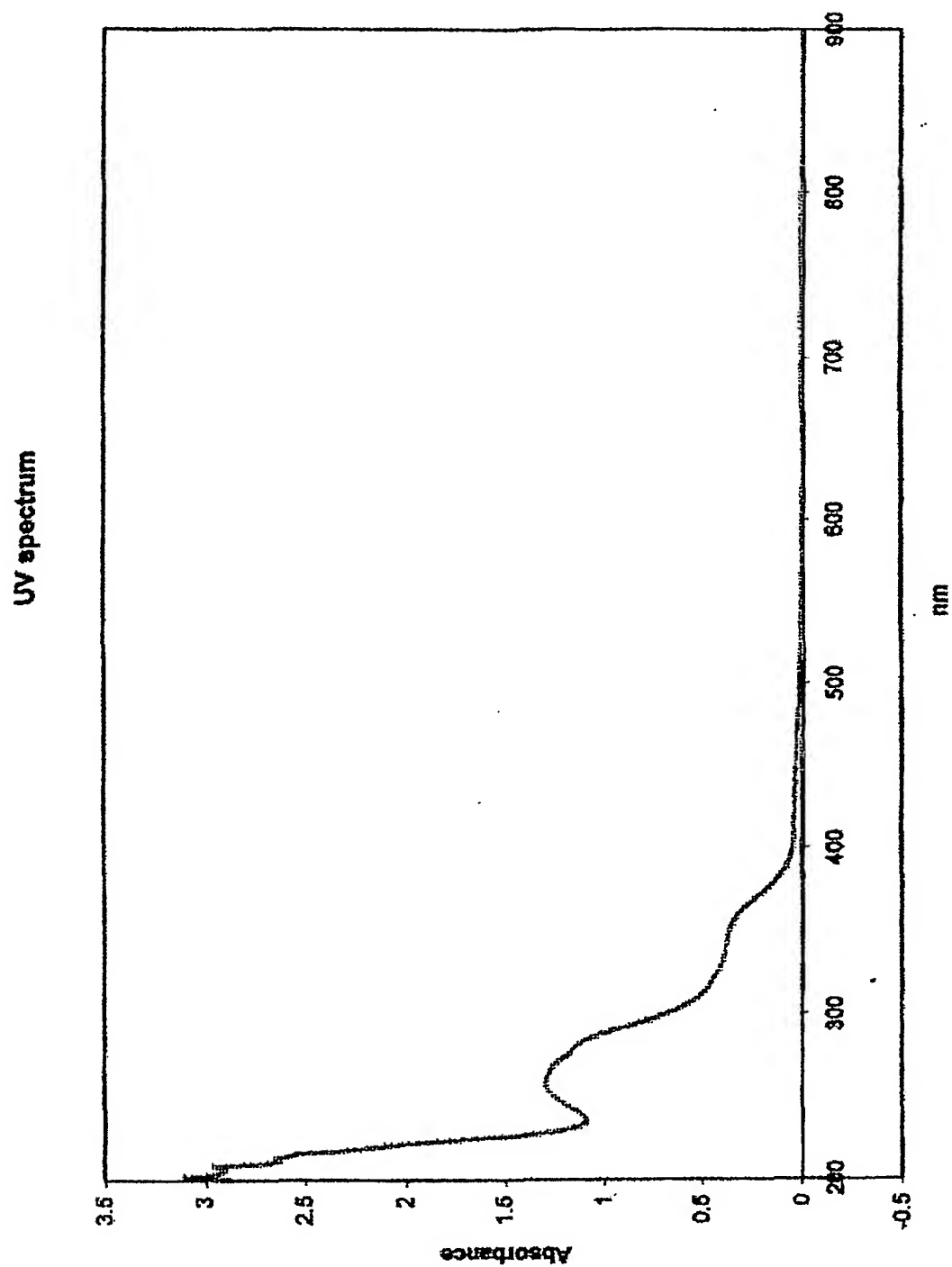


Fig 9

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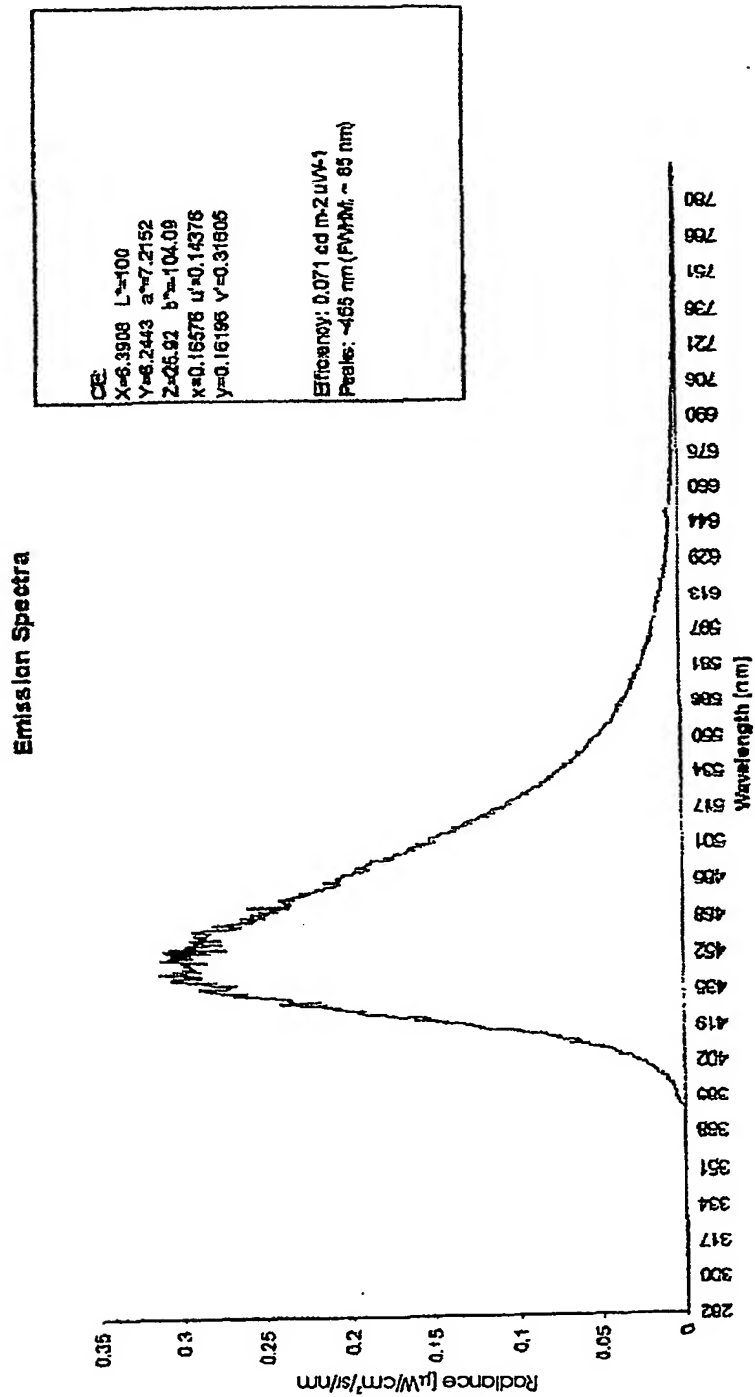


Fig 10

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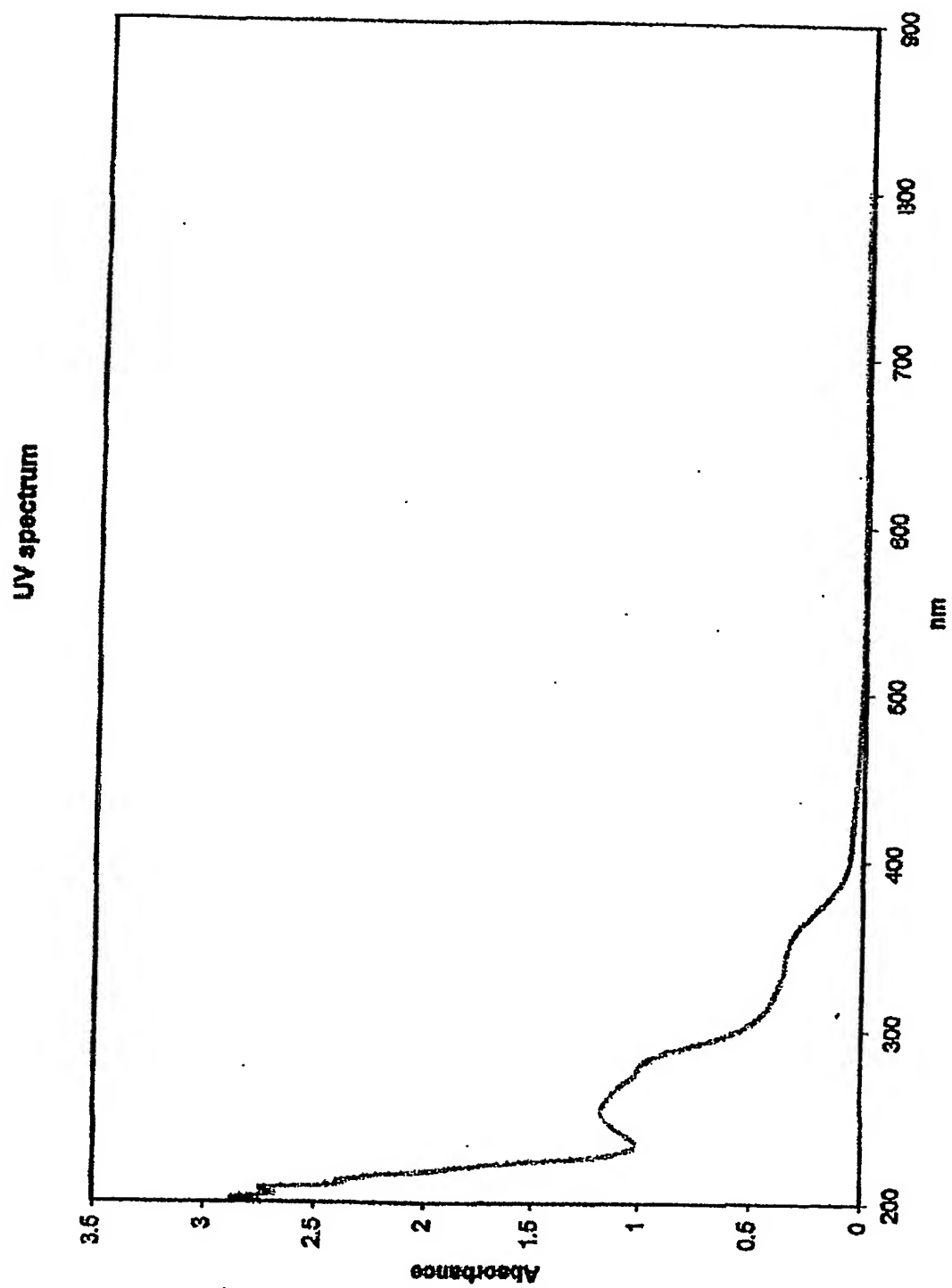


Fig 11

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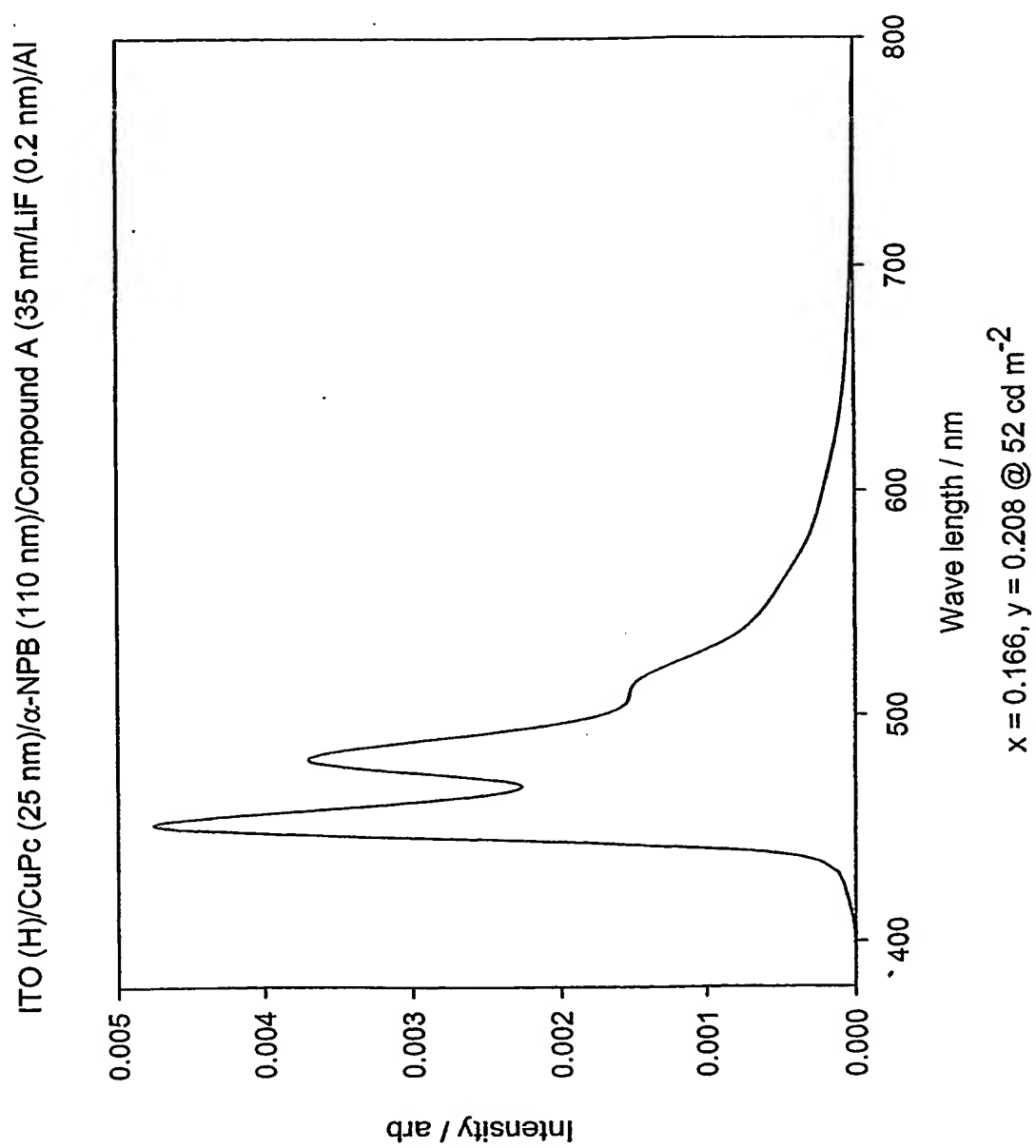
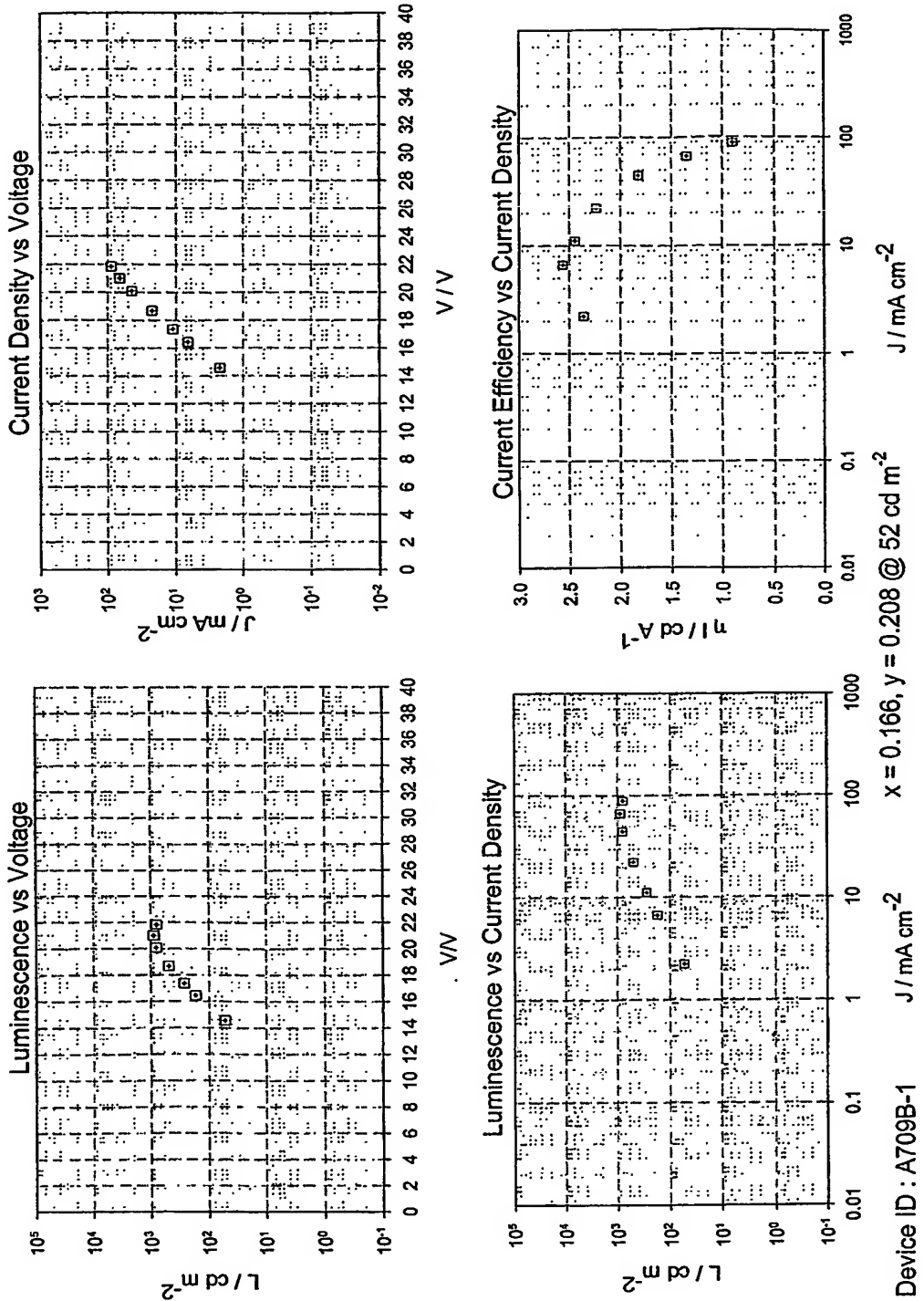


Fig 12

ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound A (35 nm)/LiF (0.2 nm)/Al



Device ID : A709B-1

$x = 0.166, y = 0.208 @ 52 \text{ cd m}^{-2}$

Fig 13

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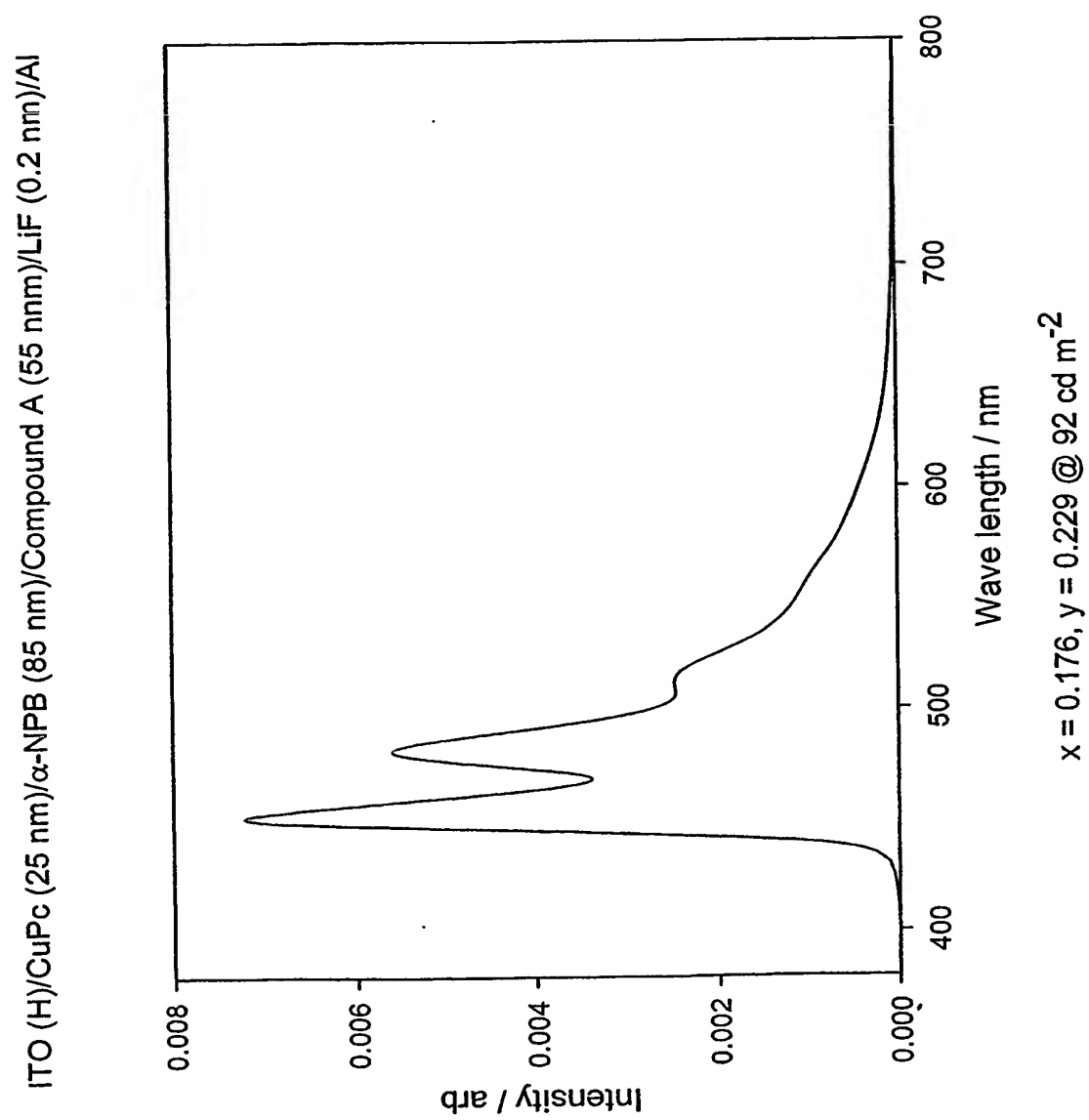


Fig 14

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ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (85 nm)/Compound A (55 nm)/LiF (0.2 nm)/Al

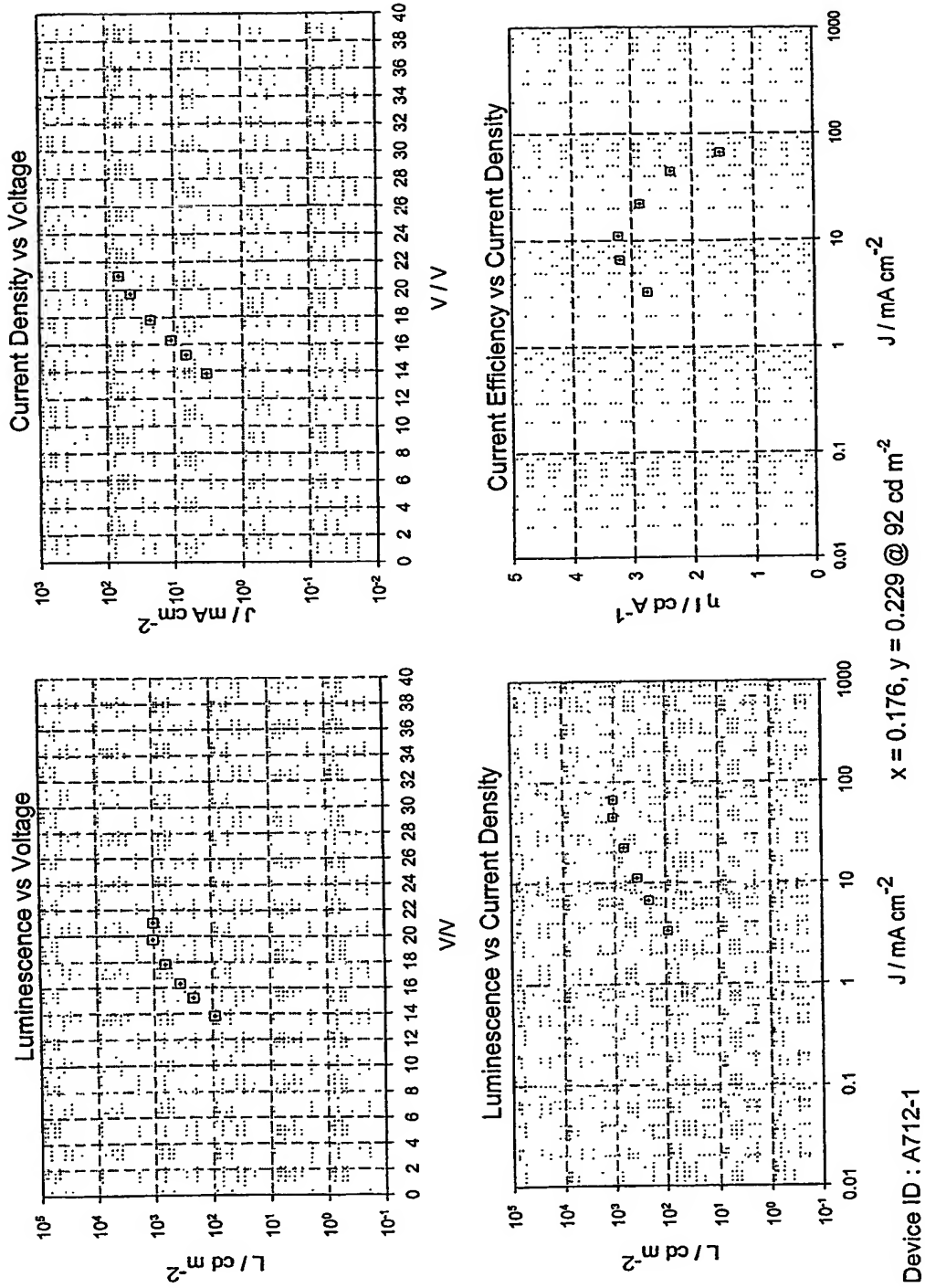


Fig 15

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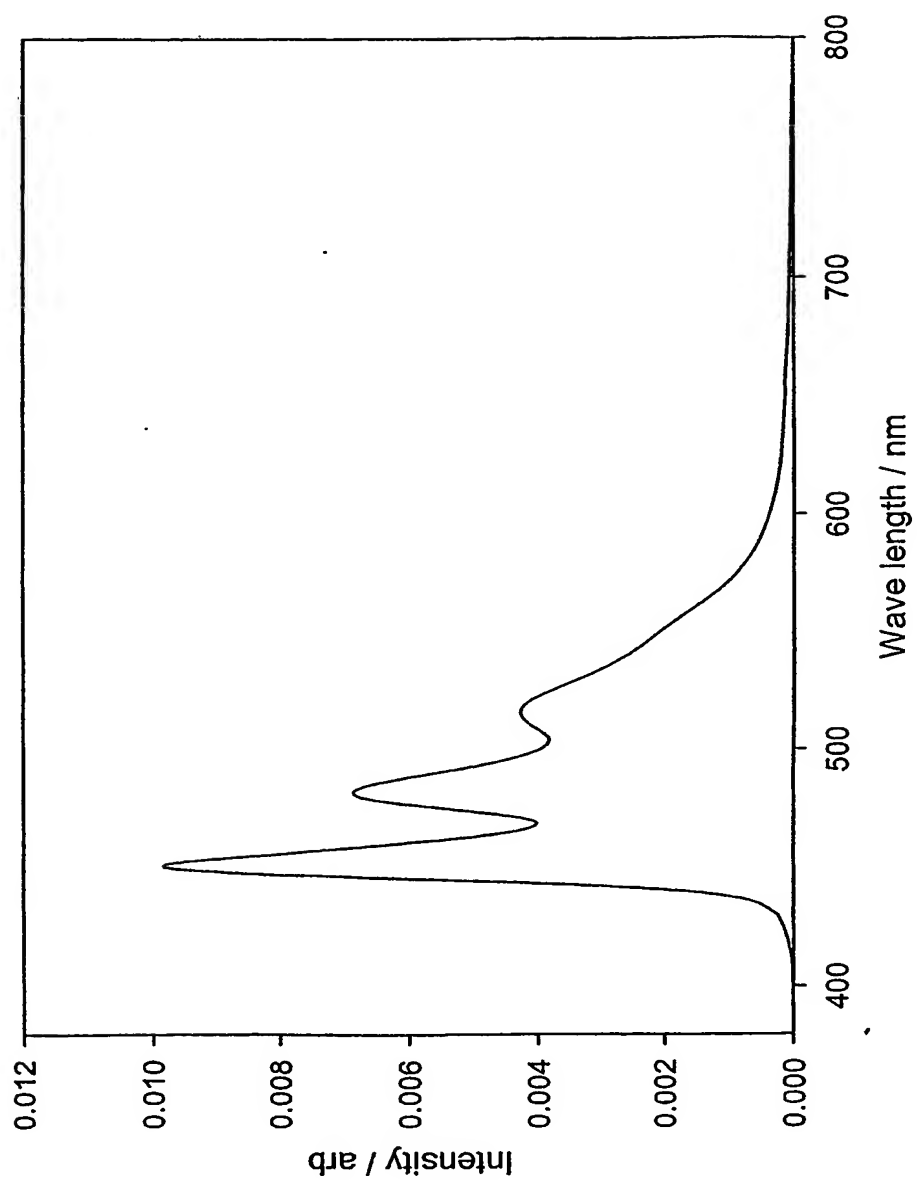
ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound A (40 nm)/Zr<sub>q</sub> (10 nm)/LiF (0.2 nm)/Al $x = 0.170, y = 0.259 @ 144 \text{ cd m}^{-2}$ 

Fig 16



ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound A (40 nm)/Zrqa (10 nm)/LiF (0.2 nm)/Al

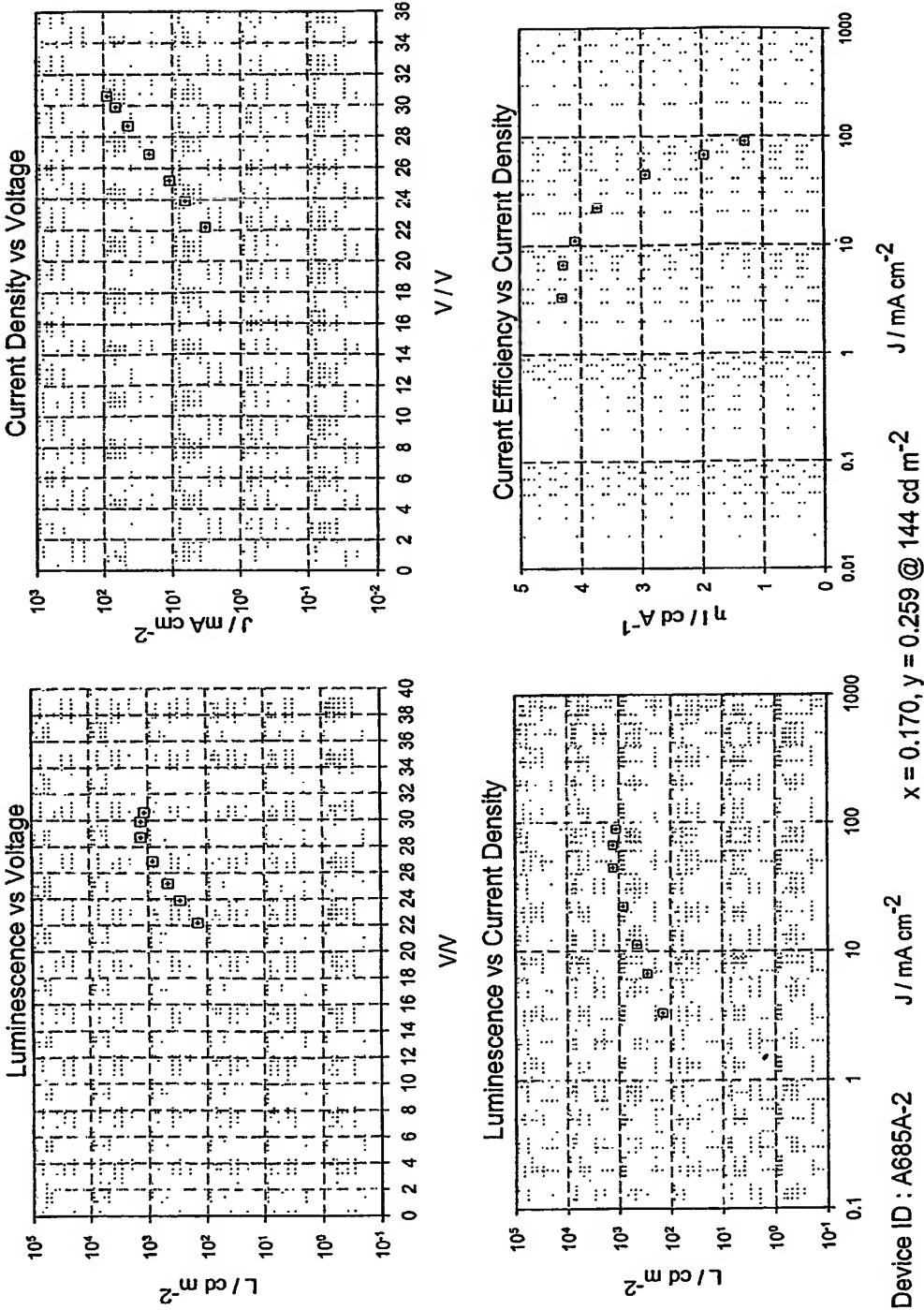


Fig 17

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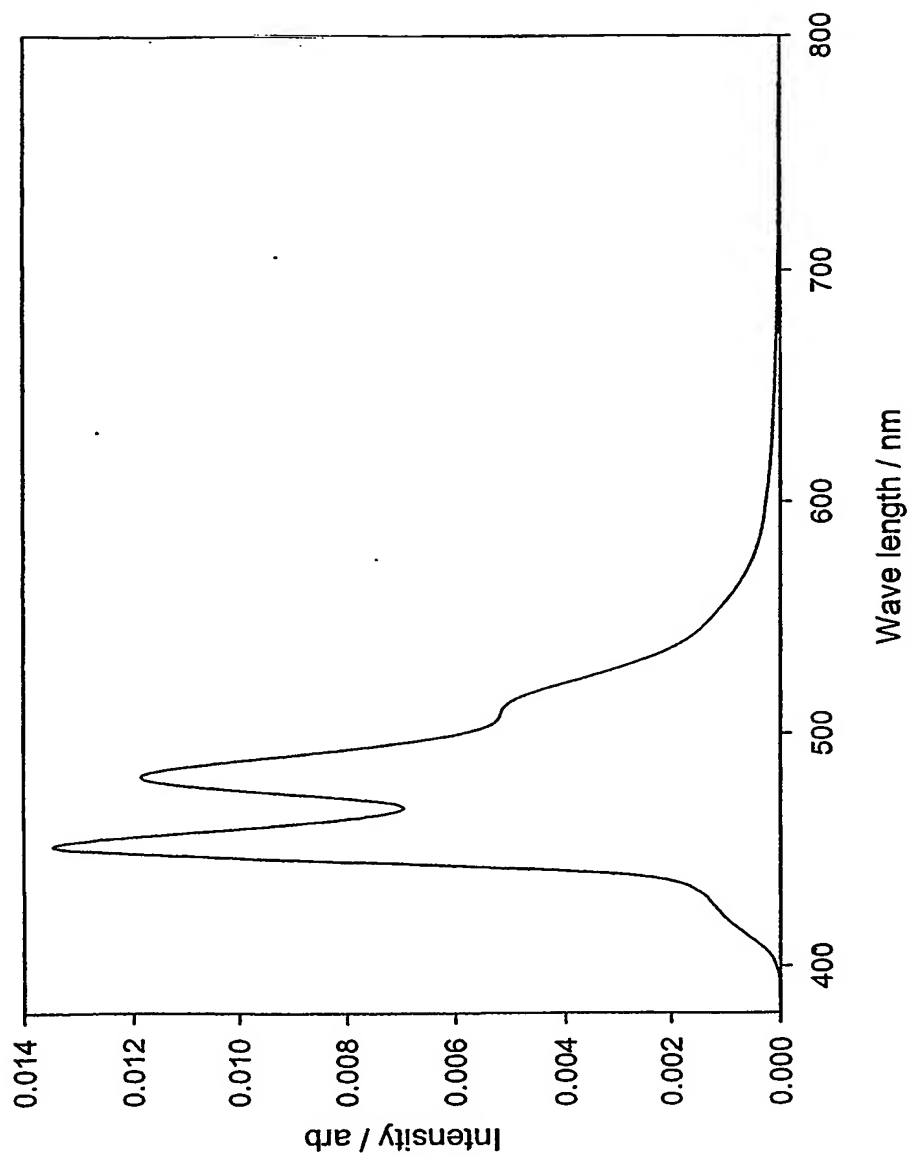
ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound B (1 nm)/Compound A (25 nm)/Zrqn (10 nm)/LiF (0.2 nm)/Alx = 0.145, y = 0.189 @ 141 cd m<sup>-2</sup>

Fig 18

ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound B (1 nm)/Compound A (25 nm)/Zr<sub>q</sub> (10 nm)/LiF (0.2 nm)/Al

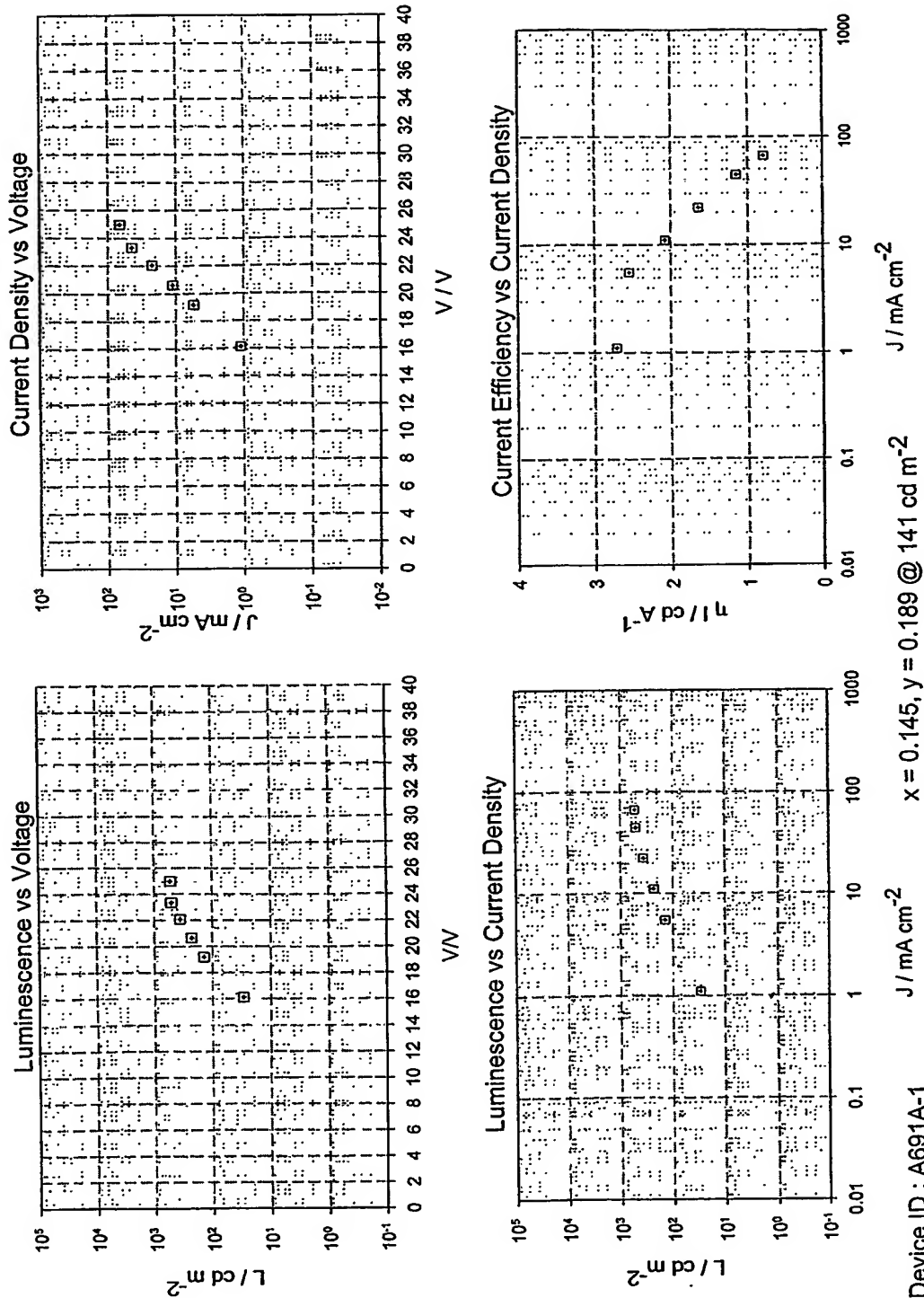
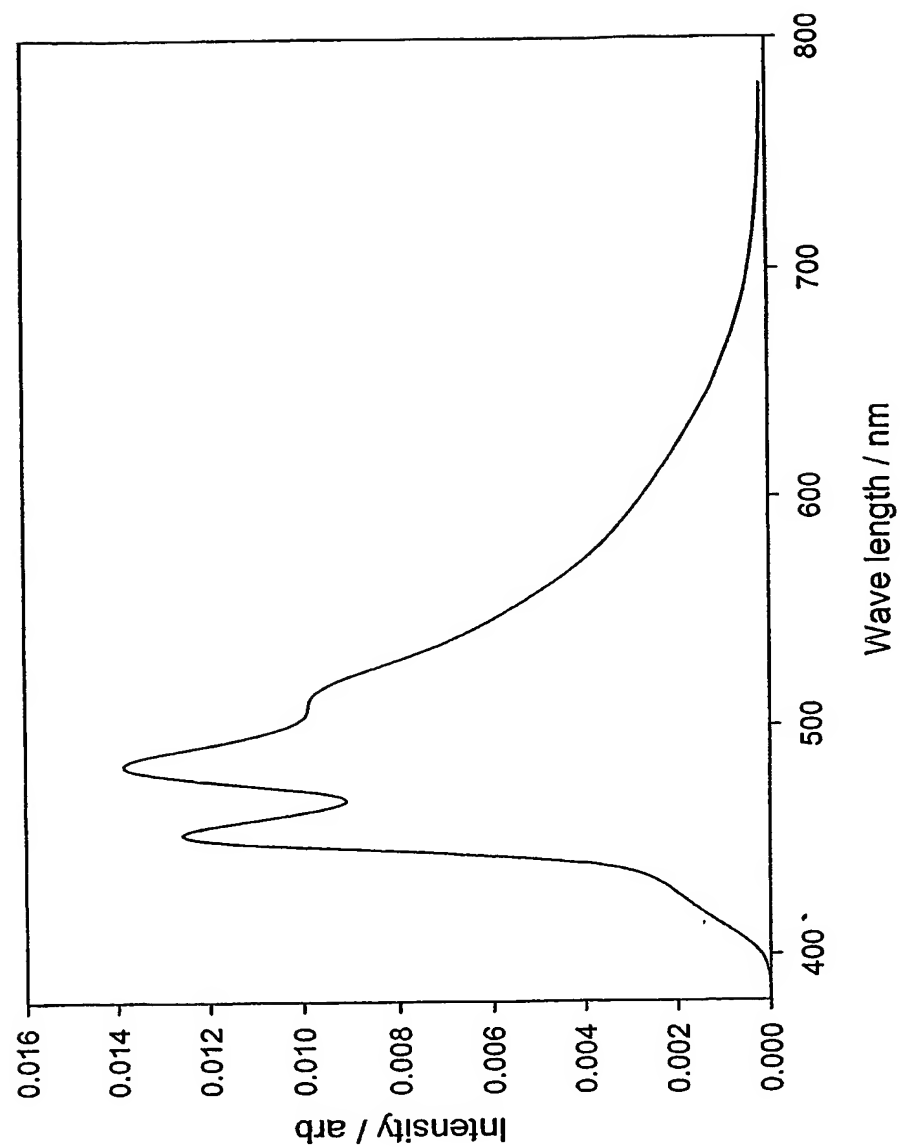


Fig 19

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ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound C (40 nm)/Zrqr4 (10 nm)/LiF (0.5 nm)/Al



x = 0.210, y = 0.290 @ 75 cd m<sup>-2</sup>

Fig 20

ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound C (40 nm)/Zrqr4 (10 nm)/LiF (0.5 nm)/Al

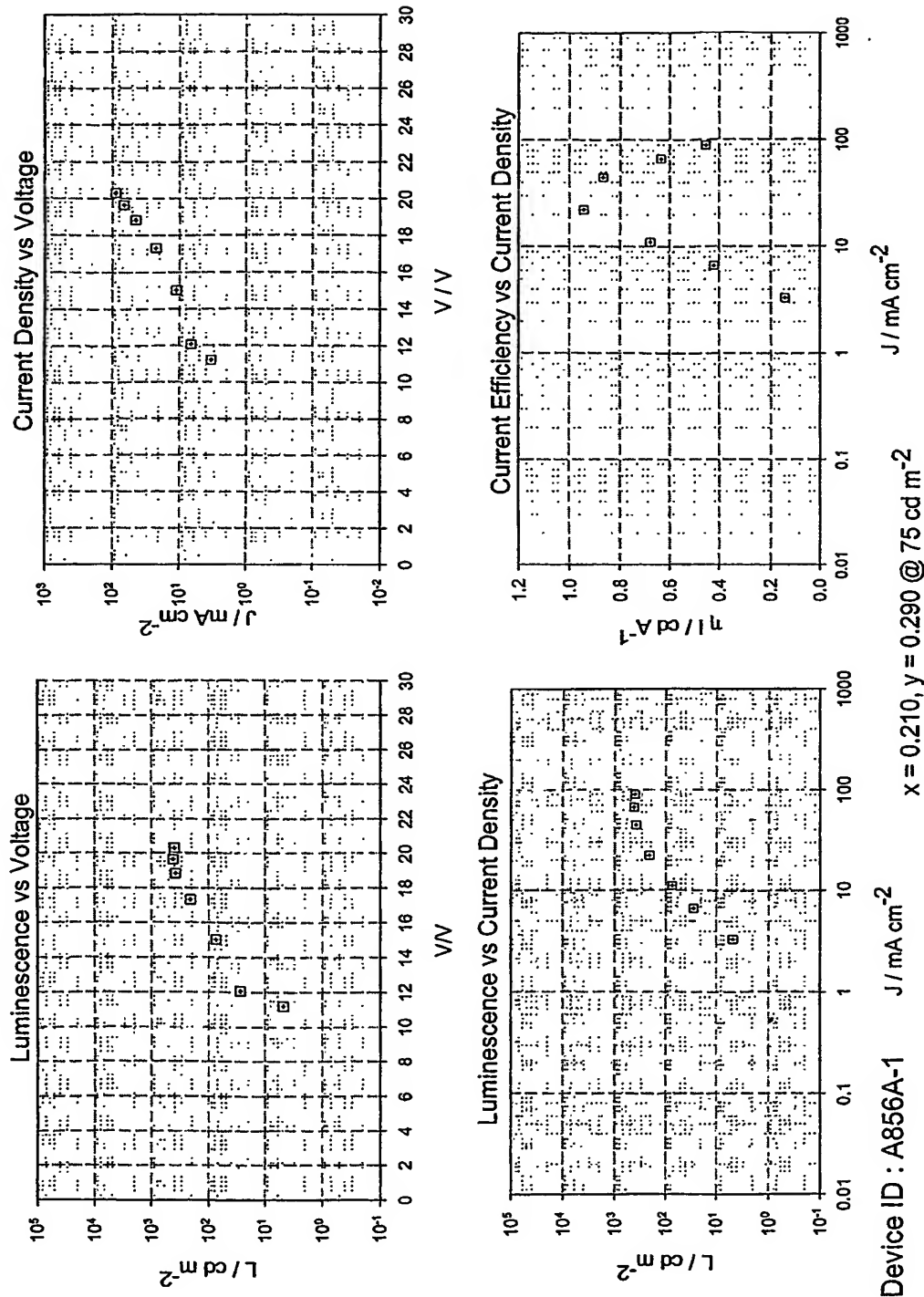


Fig 21

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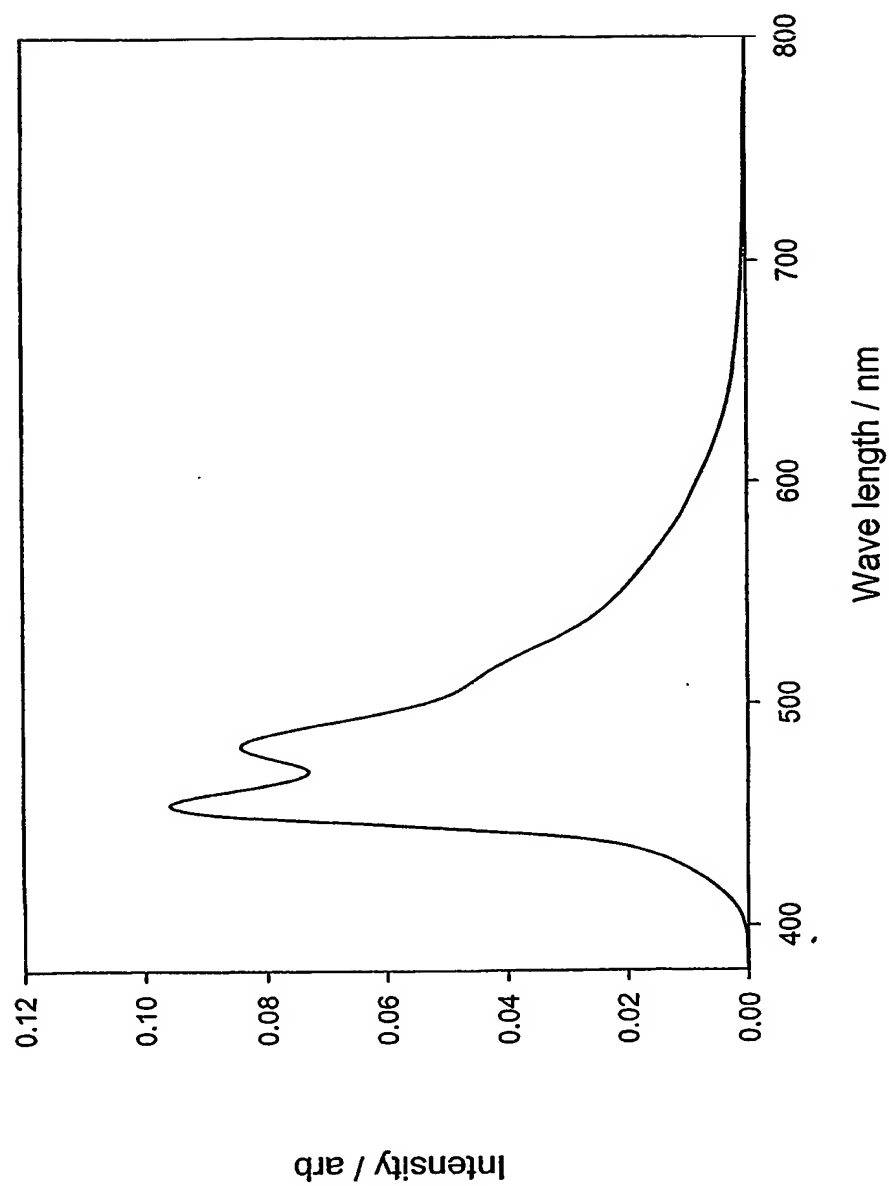
ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (75 nm)/BAIq<sub>2</sub> (15 nm)/Compound C (40 nm)/Zrqr<sub>4</sub> (10 nm)/LiF (0.5 nm)/Al $x = 0.171, y = 0.212 @ 74 \text{ cd m}^{-2}$ 

Fig 22

ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (75 nm)/BAIq2 (15 nm)/Compound C (40 nm)/ZrQ4 (10 nm)/LiF (0.5 nm)/Al

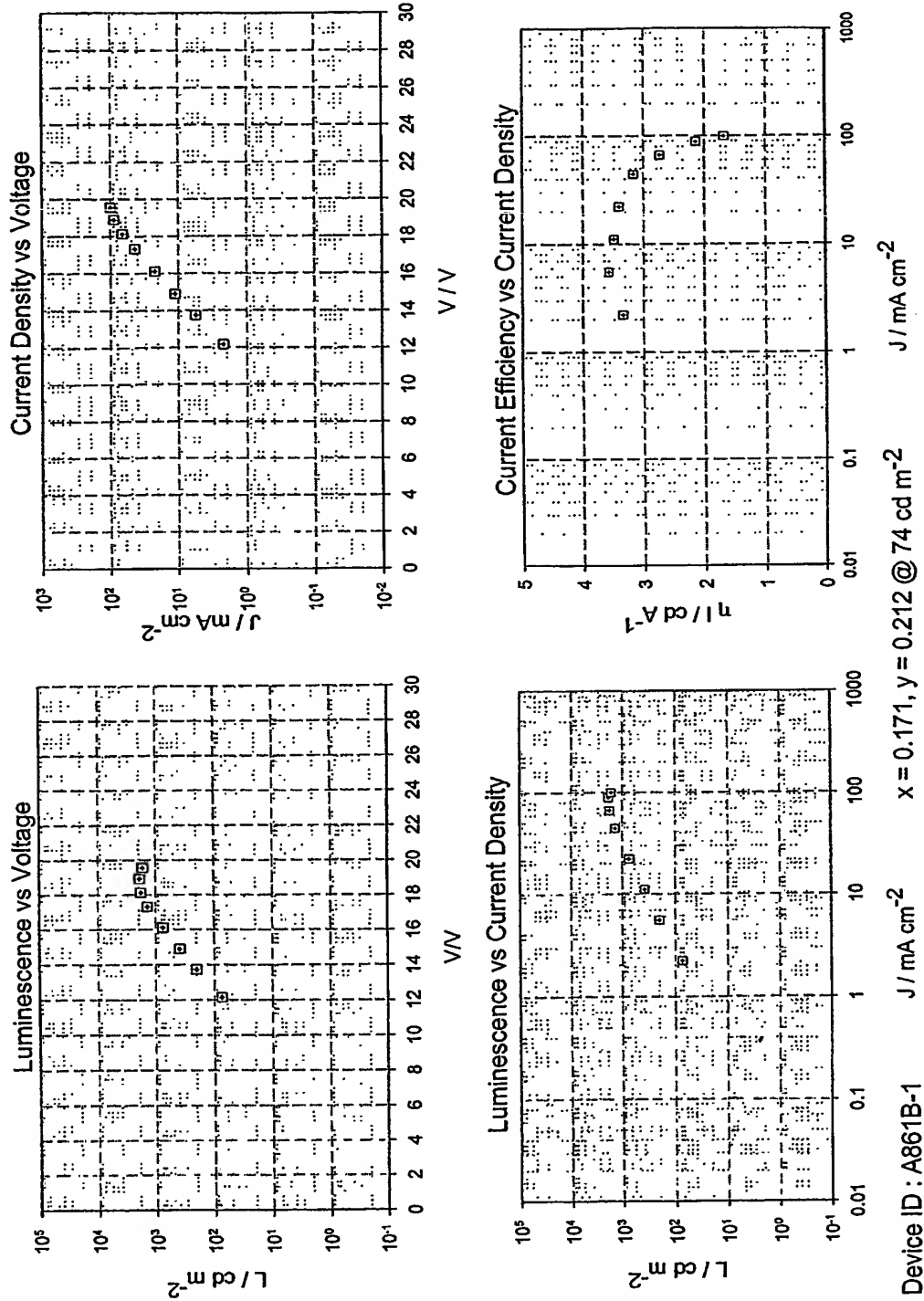


Fig 23

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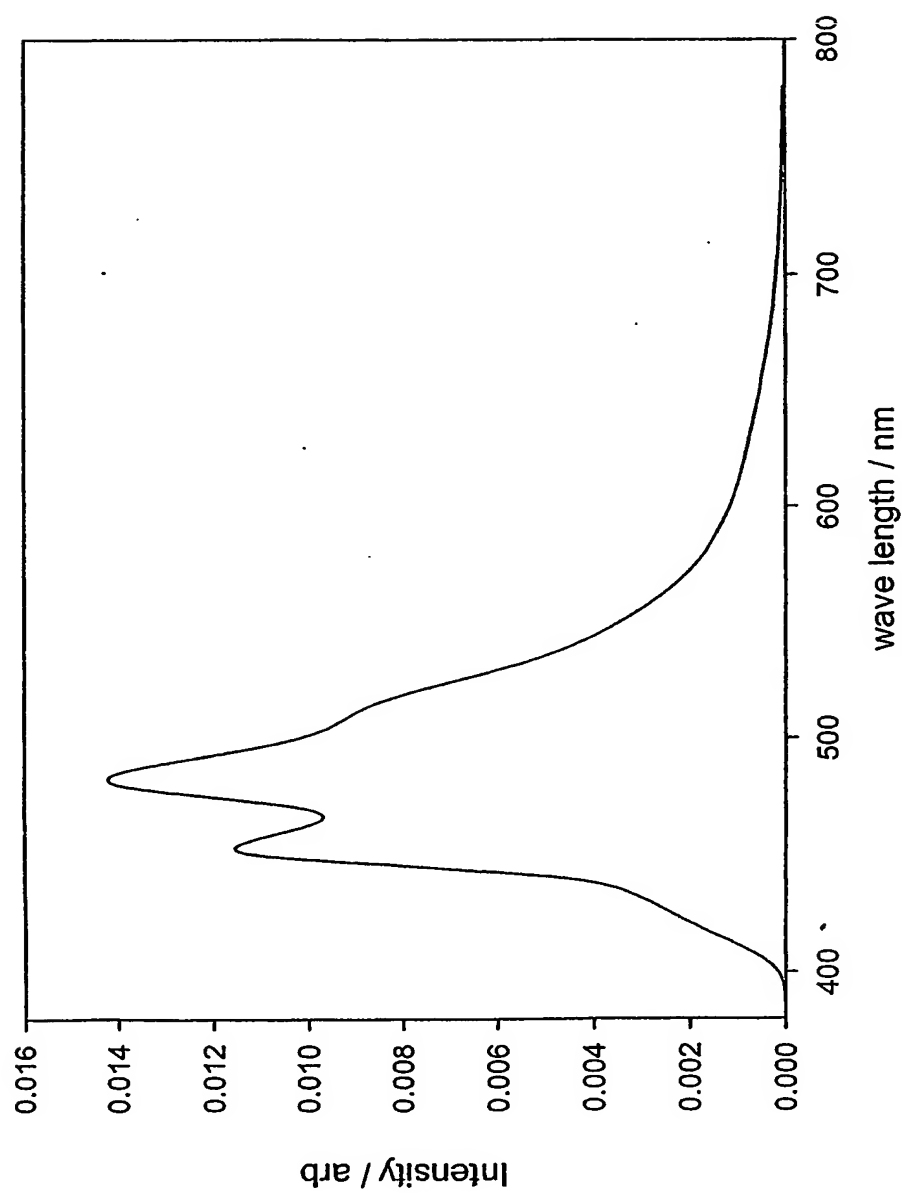
ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound D (40 nm)/BAIq<sub>2</sub> (10 nm)/LiF (0.5 nm)/Al $x = 0.181, y = 0.290 @ 108 \text{ cd m}^{-2}$ 

Fig 24



ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (110 nm)/Compound D (40 nm)/BAIq<sub>2</sub> (10 nm)/LiF (0.5 nm)/Al

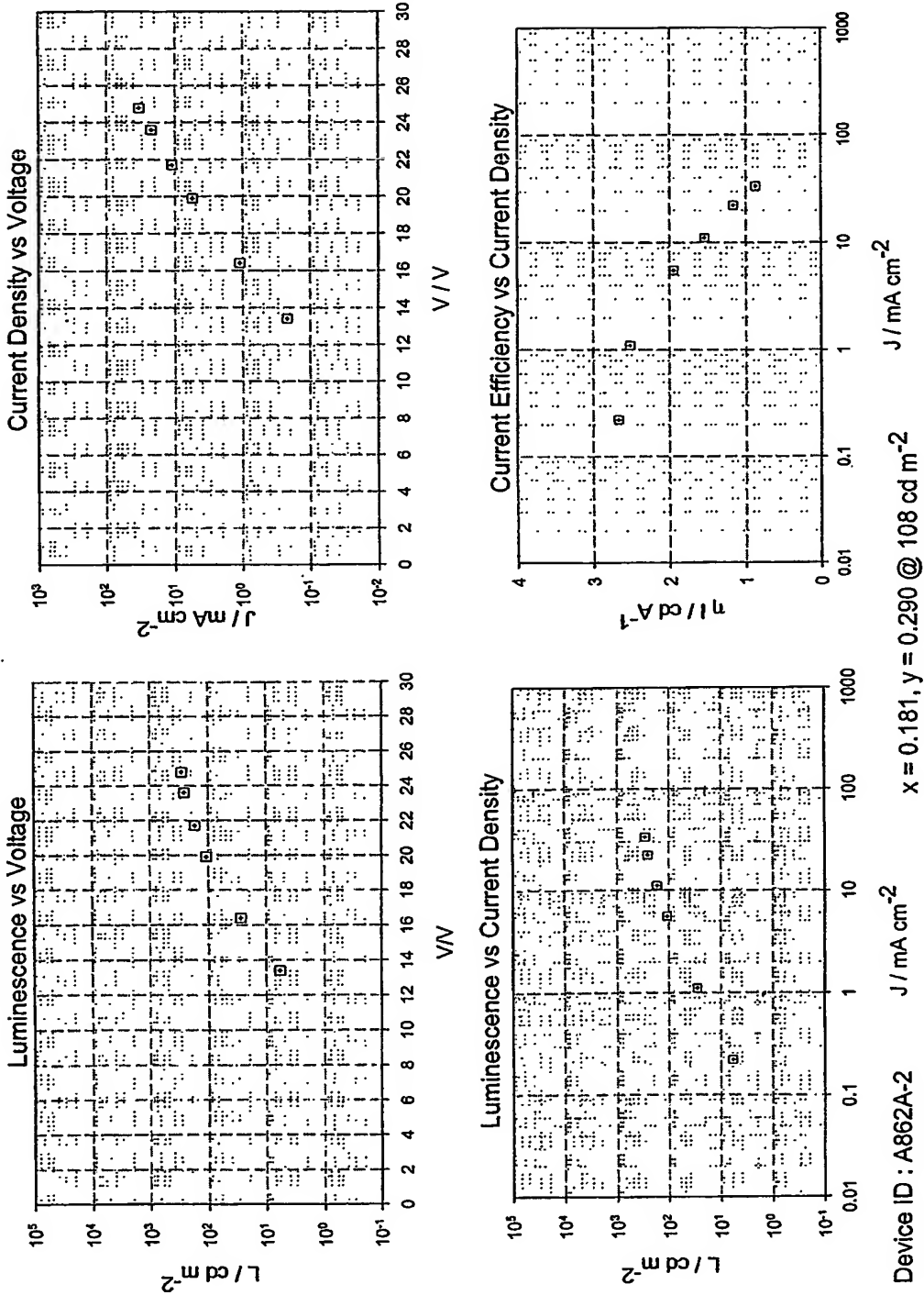


Fig 25

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ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (60 nm)/Compound E:Perylene (30:0.02 nm)/LiF (0.5 nm)/Al

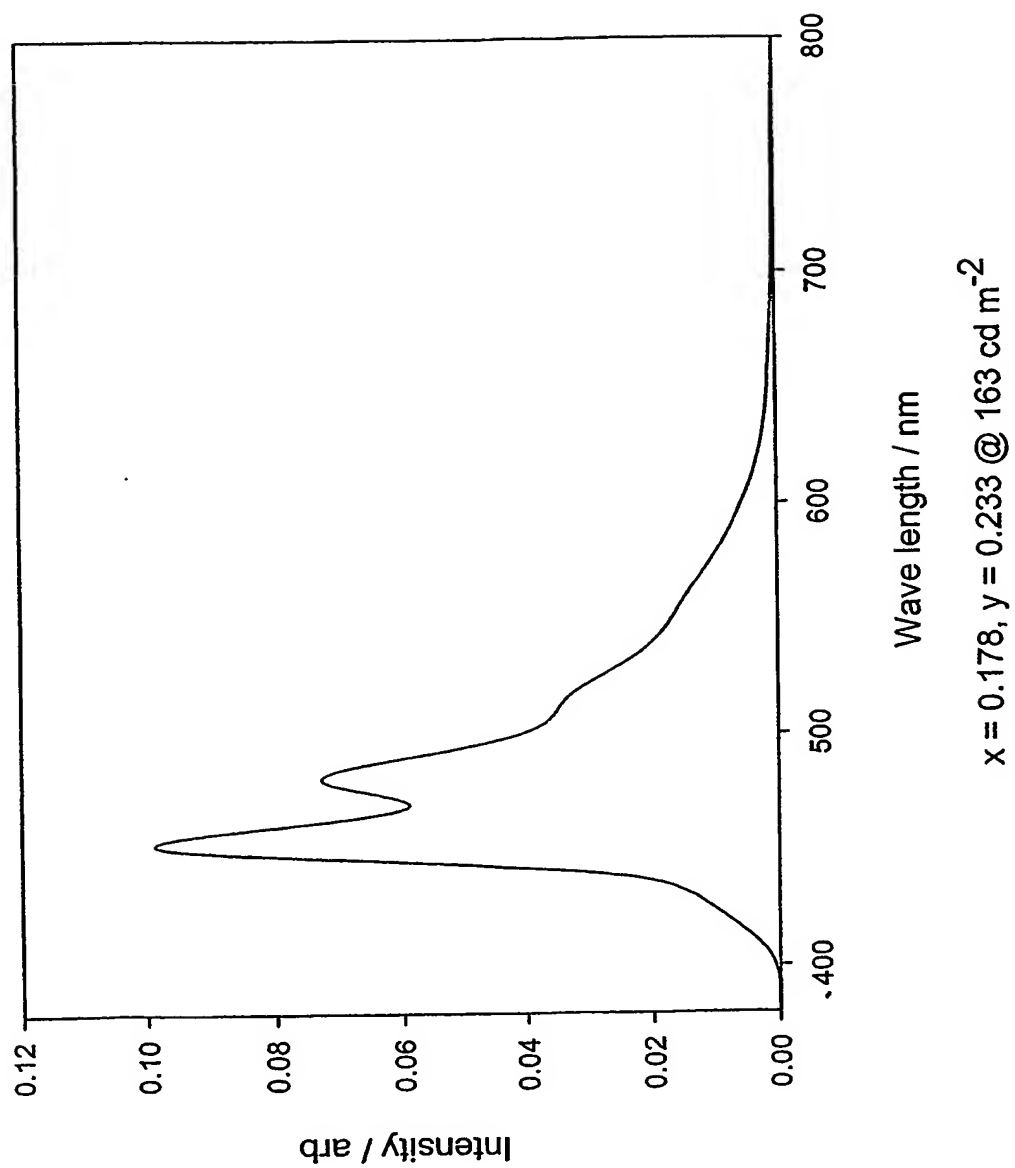


Fig 26

ITO (H)/CuPc (25 nm)/ $\alpha$ -NPB (60 nm)/Compound E:Perylene (30:0.02 nm)/LiF (0.5 nm)/Al

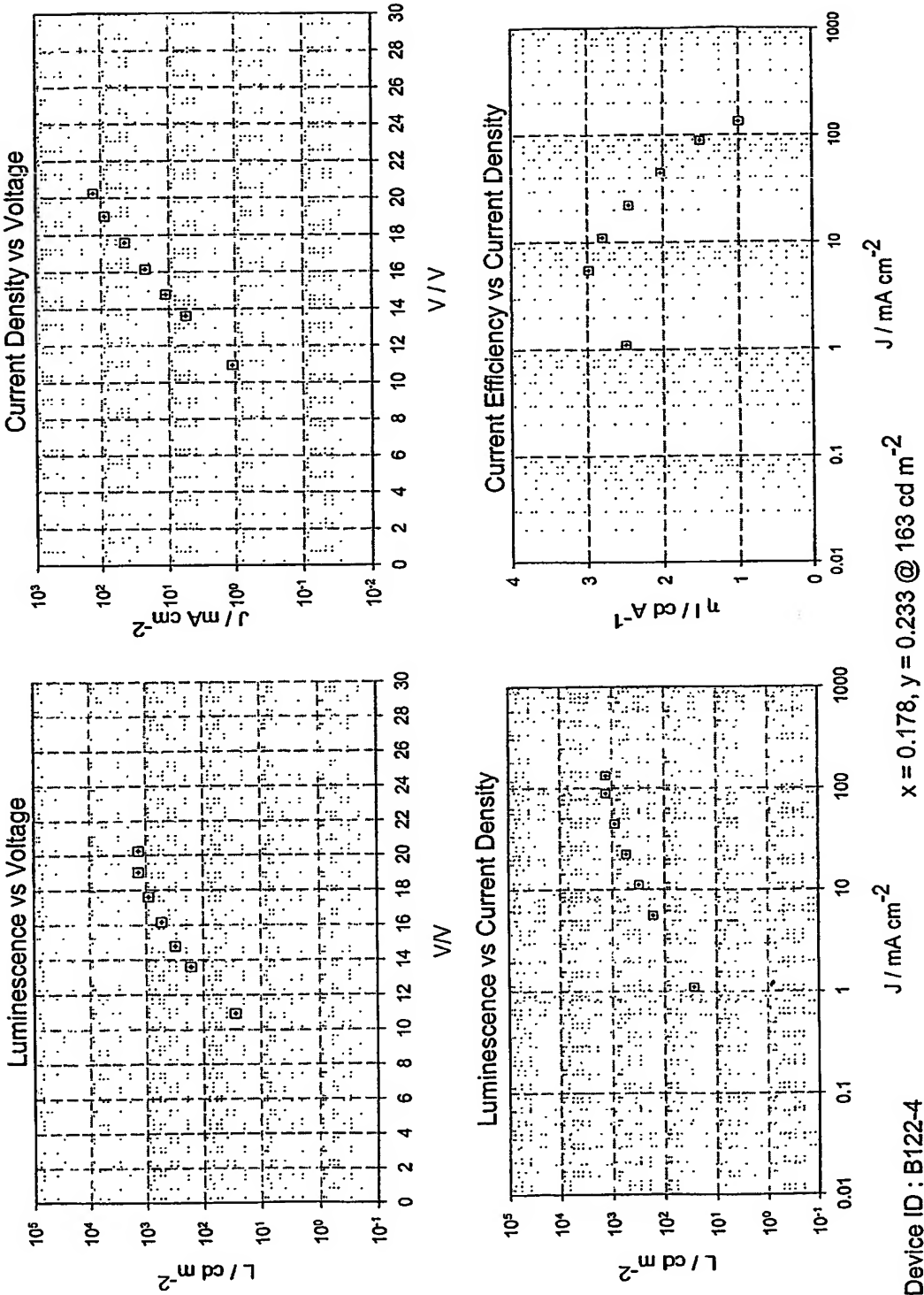


Fig 27